

Logon

\*\*\* It is now 4/17/2009 7:37:50 PM \*\*\*

## Welcome to DialogLink - Version 5 Revolutionize the Way You Work!

### New on Dialog

#### **Order Patent and Trademark File Histories Through Dialog**

*Thomson File Histories* are now available directly through *Dialog*. Combined with the comprehensive patent and trademark information on *Dialog*, file histories give you the most complete view of a patent or trademark and its history in one place. When searching in the following patent and trademark databases, a link to an online order form is displayed in your search results, saving you time in obtaining the file histories you need.

*Thomson File Histories* are available from the following *Dialog* databases:

- CLAIMS/Current Patent Legal Status (File 123)
- CLAIMS/U.S. Patents (File 340)
- Chinese Patent Abstracts in English (File 344)
- Derwent Patents Citation Index (File 342)
- Derwent World Patents Index (for users in Japan) (File 352)
- Derwent World Patents Index First View (File 331)
- Derwent World Patents Index (File 351)
- Derwent World Patents Index (File 350)
- Ei EnCompassPat (File 353)
- European Patents Fulltext (File 348)
- French Patents (File 371)
- German Patents Fulltext (File 324)
- IMS Patent Focus (File 447, 947)
- INPADOC/Family and Legal Status (File 345)
- JAPIO - Patent Abstracts of Japan (File 347)
- LitAlert (File 670)
- U.S. Patents Fulltext (1971-1975) (File 652)
- U.S. Patents Fulltext (1976-present) (File 654)
- WIPO/PCT Patents Fulltext (File 349)
- TRADEMARKSCAN - U.S. Federal (File 226)

### **DialogLink 5 Release Notes**

New features available in the latest release of DialogLink 5 (August 2006)

- Ability to resize images for easier incorporation into DialogLink Reports
- New settings allow users to be prompted to save Dialog search sessions in the format of their choice (Microsoft Word, RTF, PDF, HTML, or TEXT)
- Ability to set up Dialog Alerts by Chemical Structures and the addition of Index Chemicus as a structure searchable database
- Support for connections to STN Germany and STN Japan services

Show Preferences for details

```
? Help Log On Msg
      *** ANNOUNCEMENTS ***
      ***
*** FREE FILE OF THE MONTH (April) Promt and Trade &
Industry
Database (Files 16 and 148)
Each month Dialog offers an opportunity to try out
new or
unfamiliar sources by offering $100 of free searching
(either
DialUnits or connect time) in one specific file.
Output and
Alerts charges are not included. For more details
visit:
http://www.dialog.com/freefile/ and then take a
moment to get
familiar with another great Dialog resource.

*** "Thomson File Histories" are now available
directly through Dialog
in selected patent and trademark files. Combined
with the
comprehensive patent and trademark information on
Dialog, file
histories give you the most complete view of a patent
or trademark
```

and its history in one place. When searching in one of the patent and trademark databases, a link to an online order form is displayed in your search results, saving you time in obtaining the file histories you need. See HELP FILEHIST for more information about how to use the link and a list of files that contain the link.

NEW FILE

\*\*\*File 651, TRADEMARKSCAN(R) - China. See HELP NEWS 651 for details.

RESUMED UPDATING

\*\*\*File 523, D&B European Financial Records

\*\*\*

RELOADS COMPLETED

\*\*\*Files 154&155, MEDLINE(R)

\*\*\*File 126, TRADEMARKSCAN(R) - United Kingdom

\*\*\*File 228, TRADEMARKSCAN(R) - Spain

\*\*\*File 672, TRADEMARKSCAN(R) - Germany

\*\*\*File 655, TRADEMARKSCAN(R) - Korea

\*\*\*File 656, TRADEMARKSCAN(R) - Australia

\*\*\*File 657, TRADEMARKSCAN(R) - France

\*\*\*File 673, TRADEMARKSCAN(R) - Italy

\*\*\*

FILES RENAMED

\*\*\*File 321, PLASPEC now known as Plastic Properties Database

\*\*\*

FILES REMOVED

\*\*\*File 301, CHEMNAME - please use File 398 ChemSearch

\*\*\*File 388,PEDS: Defense Program Summaries

\*\*\*File 588,DMS-FI Contract Awards

>>>For the latest news about Dialog products, services, content<<

>>>and events, please visit What's New from Dialog at <<<

```
>>>http://www.dialog.com/whatsnew/. You can find
news about <<<
>>>a specific database by entering HELP NEWS <file
number>. <<<

? Help Off Line
* * *
Connecting to sahmed - Dialog - 291839
Connected to Dialog via SMS004043333

? b
9,15,16,20,47,75,80,88,98,112,141,148,160,275,264,331
, 340, 350, 351,
352,369,370,484,553,570,608,620,613,621,623,624,634,6
35,636,647,696,674, 324, 344, 348, 349,
371,810,813,587
>>>W: 352 is unauthorized
1 of the specified files is not available
[File 9] Business & Industry(R) Jul/1994-2009/Apr 15
(c) 2009 Gale/Cengage. All rights reserved.

[File 15] ABI/Inform(R) 1971-2009/Apr 17
(c) 2009 ProQuest Info&Learning. All rights reserved.

[File 16] Gale Group PROMT(R) 1990-2009/Mar 26
(c) 2009 Gale/Cengage. All rights reserved.
*File 16: UD/banner does not reflect last processed date

[File 20] Dialog Global Reporter 1997-2009/Apr 17
(c) 2009 Dialog. All rights reserved.

[File 47] Gale Group Magazine DB(TM) 1959-2009/Apr 08
(c) 2009 Gale/Cengage. All rights reserved.

[File 75] TGG Management Contents(R) 86-2009/Mar W2
(c) 2009 Gale/Cengage. All rights reserved.

[File 80] TGG Aerospace/Def.Mkts(R) 1982-2009/Mar 24
(c) 2009 Gale/Cengage. All rights reserved.

[File 88] Gale Group Business A.R.T.S. 1976-2009/Apr 16
(c) 2009 Gale/Cengage. All rights reserved.

[File 98] General Sci Abs 1984-2009/Apr
(c) 2009 The HW Wilson Co. All rights reserved.

[File 112] UBM Industry News 1998-2004/Jan 27
(c) 2004 United Business Media. All rights reserved.
```

\*File 112: This file is closed. For more recent UBM/CMP records, please search DIALOG Newsroom files.

[File 141] **READERS GUIDE** 1983-2009/MAR

(c) 2009 THE HW WILSON CO. All rights reserved.

[File 148] **Gale Group Trade & Industry DB** 1976-2009/Apr 02

(c) 2009 Gale/Cengage. All rights reserved.

\*File 148: The CURRENT feature is not working in File 148. See HELP NEWS148.

[File 160] **Gale Group PROMT(R)** 1972-1989

(c) 1999 The Gale Group. All rights reserved.

[File 275] **Gale Group Computer DB(TM)** 1983-2009/Mar 23

(c) 2009 Gale/Cengage. All rights reserved.

[File 264] **DIALOG Defense Newsletters** 1989-2009/Apr 17

(c) 2009 Dialog. All rights reserved.

[File 331] **Derwent WPI First View/UD=200919**

(c) 2009 Thomson Reuters. All rights reserved.

\*File 331: Due to update delays, First View updates 200910-200913 will be skipped to align update codes with WPI. There will be no data loss.

[File 340] **CLAIMS(R)/US Patent** 1950-09/Apr 14

(c) 2009 IFI/CLAIMS(R). All rights reserved.

[File 350] **Derwent WPIX** 1963-2009/UD=200920

(c) 2009 Thomson Reuters. All rights reserved.

[File 351] **Derwent WPI** 1963-2009/UD=200920

(c) 2009 Thomson Reuters. All rights reserved.

[File 369] **New Scientist** 1994-2009/Mar W5

(c) 2009 Reed Business Information Ltd. All rights reserved.

[File 370] **Science** 1996-1999/Jul W3

(c) 1999 AAAS. All rights reserved.

\*File 370: This file is closed (no updates). Use File 47 for more current information.

[File 484] **Periodical Abs Plustext** 1986-2009/Apr W2

(c) 2009 ProQuest. All rights reserved.

\*File 484: Despite the gap in UDs all content is present.

[File 553] **Wilson Bus. Abs.** 1982-2009/Apr

(c) 2009 The HW Wilson Co. All rights reserved.

[File 570] **Gale Group MARS(R)** 1984-2009/Mar 27

(c) 2009 Gale/Cengage. All rights reserved.

[File 608] **MCT Information Svc.** 1992-2009/Apr 17

(c) 2009 MCT Information Svc. All rights reserved.

[File 620] **EIU:Viewswire** 2009/Apr 16

(c) 2009 Economist Intelligence Unit. All rights reserved.

[File 613] **PR Newswire** 1999-2009/Apr 17

(c) 2009 PR Newswire Association Inc. All rights reserved.

\*File 613: File 613 now contains data from 5/99 forward. Archive data (1987-4/99) is available in File 813.

[File 621] **Gale Group New Prod.Annou.(R)** 1985-2009/Mar 13

(c) 2009 Gale/Cengage. All rights reserved.

[File 623] **Business Week** 1985-2009/Apr 15

(c) 2009 The McGraw-Hill Companies Inc. All rights reserved.

[File 624] **McGraw-Hill Publications** 1985-2009/Apr 17

(c) 2009 McGraw-Hill Co. Inc. All rights reserved.

[File 634] **San Jose Mercury** Jun 1985-2009/Apr 16

(c) 2009 San Jose Mercury News. All rights reserved.

[File 635] **Business Dateline(R)** 1985-2009/Apr 17

(c) 2009 ProQuest Info&Learning. All rights reserved.

[File 636] **Gale Group Newsletter DB(TM)** 1987-2009/Mar 27

(c) 2009 Gale/Cengage. All rights reserved.

[File 647] **UBM Computer Fulltext** 1988-2009/Feb W3

(c) 2009 UBM, LLC. All rights reserved.

[File 696] **DIALOG Telecom. Newsletters** 1995-2009/Apr 08

(c) 2009 Dialog. All rights reserved.

[File 674] **Computer News Fulltext** 1989-2006/Sep W1

(c) 2006 IDG Communications. All rights reserved.

\*File 674: File 674 is closed (no longer updates).

[File 324] **GERMAN PATENTS FULLTEXT** 1967-200916

(c) 2009 UNIVENTIO/THOMSON. All rights reserved.

[File 344] **Chinese Patents Abs** Jan 1985-2006/Jan

(c) 2006 European Patent Office. All rights reserved.

[File 348] **EUROPEAN PATENTS** 1978-200915

(c) 2009 European Patent Office. All rights reserved.

[File 349] **PCT FULLTEXT** 1979-2009/UB=20090402|UT=20090326

(c) 2009 WIPO/Thomson. All rights reserved.

[File 371] **French Patents** 1961-2002/BOPI 200209

(c) 2002 INPI. All rts. reserv. All rights reserved.

[File 810] **Business Wire** 1986-1999/Feb 28

(c) 1999 Business Wire . All rights reserved.

[File 813] **PR Newswire** 1987-1999/Apr 30

(c) 1999 PR Newswire Association Inc. All rights reserved.

[File 587] **Jane's Defense&Aerospace** 2009/Mar W3

(c) 2009 Jane's Information Group. All rights reserved.



84342997 PY>2003  
S4 0 S S3 NOT PY>2003

? TYPE S3/3, K/ALL

3/3,K/1 (Item 1 from file: 340) [Links](#)

Fulltext available through: [Order File History](#)

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

10643974

E/APPARATUS AND METHOD TO RECEIVE AND ALIGN INCOMING DATA IN A BUFFER TO EXPAND DATA WIDTH BY UTILIZING A SINGLE WRITE PORT MEMORY

DEVICE

Inventors:**Gulati Manu (US); Moll Laurent R (US)**

Assignee: Unassigned Or Assigned To Individual

Assignee Code: 68000

Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: GARLICK HARRISON & MARKISON LLP, P.O. BOX

160727, AUSTIN, TX, 78716-0727, US

Publication Date	Application Number	Kind	Date	Number
-----	-----	-----	-----	-----
20031014	US 20040151203	A1	20040805	US 2003685231
Cont.-in-part of:	Pending			US 2003356661
20030131				US 2003685231
Priority Applic:				US 2003356661
20031014				US 2003356661
20030131				

Document Type:

Inventors:**Gulati Manu...**

...**Moll Laurent R**

Non-exemplary Claims:

...7. The apparatus of claim 4 wherein the received data is based on

**SPI-4 protocol...**

...14 wherein one input decode and routing unit decodes and

routes incoming  
data based on **SPI**-4 protocol...

...20. The method of claim 19 wherein the data is based on **SPI**-4  
protocol...

3/3,K/2 (Item 2 from file: 340) [Links](#)

Fulltext available through: [Order File History](#)

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

10512500 2004-0019704  
E/MULTIPLE PROCESSOR INTEGRATED CIRCUIT HAVING CONFIGURABLE  
PACKET-BASED INTERFACES  
Inventors:**Gulati Manu** (US); Keller James (US); **Moll**  
**Laurent** (US); Sano Barton (US)  
Assignee: Unassigned Or Assigned To Individual  
Assignee Code: 68000  
Attorney, Agent or Firm: GARLICK HARRISON & MARKISON LLP, P.O.  
BOX  
160727, AUSTIN, TX, 78716-0727, US

Publication Date	Application Number	Kind	Date	Number
----- 20030131	US 20040019704	A1	20040129	US 2003356390
Priority Applic: 20030131				US 2003356390
Provisional Applic: 20020515				US 60-380740
20021016				US 60-419032

Document Type:

Inventors:**Gulati Manu...**

...**Moll Laurent**

Non-exemplary Claims:

...at least one of a HyperTransport (HT) input/output port and a System  
Packet Interface (**SPI**) input/ output port; and the second  
configurable packet-based interface is configured to provide  
at least  
one of the HyperTransport (HT) input/output port and the  
System Packet  
Interface (**SPI**) input/ output port...

...packet-based protocol further comprises at least one of  
HyperTransport  
(HT) and System Packet Interface (**SPI**).  
...

...at least one of a HyperTransport (HT) input/output port and a System

Packet Interface (**SPI**) input/output port; and the second  
configurable packet-based interface is configured to provide  
at least  
one of the HyperTransport (HT) input/output port and the  
System Packet

Interface (**SPI**) input/output port...

...at least one of a HyperTransport (HT) input/output port and a System

Packet Interface (**SPI**) input/output port; and the second  
packet-based interface is configured to provide at least one  
of the  
HyperTransport (HT) input/output port and the System Packet  
Interface (  
**SPI**) input/output port

3/3,K/3 (Item 3 from file: 340) [Links](#)

Fulltext available through: [Order File History](#)

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

10510609 2004-0017813  
E/TRANSMITTING DATA FROM A PLURALITY OF VIRTUAL CHANNELS VIA A  
MULTIPLE PROCESSOR DEVICE  
Inventors:**Gulati Manu** (US); Keller James (US); **Moll**  
**Laurent** (US)  
Assignee: Unassigned Or Assigned To Individual  
Assignee Code: 68000  
Probable Assignee (A1): Broadcom Corp  
Attorney, Agent or Firm: GARLICK HARRISON & MARKISON LLP, P.O.  
BOX  
160727, AUSTIN, TX, 78716-0727, US

Publication Date	Application Number	Kind	Date	Number
-----	-----	-----	-----	-----
20030131	US 20040017813	A1	20040129	US 2003356348
Priority Applic:				US 2003356348
20030131				
Provisional Applic:				US 60-380740
20020515				
				US 60-419040
20021016				

Document Type:

Inventors:**Gulati Manu...**

...**Moll Laurent**

Abstract: ...the stored data in accordance with a 1st or 2nd transmission protocol (e.g., HT, **SPI**, et cetera) to produce a packetized transmission.

Non-exemplary Claims:

...to produce buffered data; packetizing the buffered data in accordance with a System Packet Interface (**SPI**) protocol to produce **SPI** packets; and elastic storing the **SPI** packets  
...

...to produce buffered data; packetize the buffered data in accordance with

a System Packet Interface (**SPI**) protocol to produce **SPI** packets; and elastic store the **SPI** packets...

...to produce buffered data; packetize the buffered data in accordance with

a System Packet Interface (**SPI**) protocol to produce **SPI** packets; and elastic store the **SPI** packets.

3/3,K/4 (Item 4 from file: 340) [Links](#)

Fulltext available through: [Order File History](#)

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

04936326

E/(A1) HYPERTRANSPORT/**SPI**-4 INTERFACE SUPPORTING  
CONFIGURABLE DESKEWING  
(B2) HYPERTRANSPORT/**SPI**-4 INTERFACE SUPPORTING CONFIGURABLE  
DESKEWING

Inventors:**Gulati Manu** (US); **Moll Laurent R** (US)

Assignee: (A1) Unassigned Or Assigned To Individual

(B2) Broadcom Corp

Assignee Code: (A1) 68000; (B2) 59773

Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: Garlick Harrison & Markison; Garlick,  
Bruce E.

; Smith, Kevin L.

Publication Date	Application Number	Kind	Date	Number
20031220	US 20040130347	A1	20040708	US 2003742060
20031220	US 7490187	B2	20090210	US 2003742060
Cont.-in-part of: 20030131	Pending			US 2003356390
Prior Publication: 20031220	US 20040130347	A1	20040708	US 2003742060
20030131				US 2003356390
Provisional Applic: 20020515				US 60-380740
20020516				US 60-419032
Calculated Expiration: 20230131				
Notes: Subject to any Disclaimer,				
the term of this patent is extended or adjusted under 35 USC 154(b) by 940 days.				

...HYPERTRANSPORT/**SPI**-4 INTERFACE SUPPORTING CONFIGURABLE  
DESKEWING

...

...HYPERTRANSPORT/**SPI**-4 INTERFACE SUPPORTING CONFIGURABLE  
DESKEWING

Document Type:

Inventors:**Gulati Manu**...

...**Moll Laurent R**

Non-exemplary Claims:

...digital interface of claim 1, wherein the at least one other  
interface standard includes the **SPI**-4 Standard...

...The method of claim 11, wherein the at least one other  
interface  
standard includes the **SPI**-4 Standard...

...digital interface of claim 1, wherein the at least one other  
interface  
standard includes the **SPI**-4 Standard...

...The method of claim 11, wherein the at least one other  
interface  
standard includes the **SPI**-4 Standard...

3/3,K/5 (Item 5 from file: 340) [Links](#)

Fulltext available through: [Order File History](#)

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

04735596

E/(A1) APPARATUS AND METHOD TO RECEIVE AND DECODE INCOMING DATA  
AND TO HANDLE REPEATED SIMULTANEOUS SMALL FRAGMENTS

(B2) APPARATUS AND METHOD TO RECEIVE AND DECODE INCOMING DATA  
AND TO

HANDLE REPEATED SIMULTANEOUS SMALL FRAGMENTS

Inventors:**Gulati Manu** (US); **Moll Laurent R** (US)

Assignee: (A1) Unassigned Or Assigned To Individual  
(B2) Broadcom Corp

Assignee Code: (A1) 68000; (B2) 59773

Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: Garlick Harrison & Markison

Publication Date	Application Number	Kind	Date	Number
-----	-----	-----	-----	-----
20031014	US 20040153586	A1	20040805	US 2003684998
20031014	US 7319702	B2	20080115	US 2003684998
Cont.-in-part of: 20030131	Pending			US 2003356661
Prior Publication: 20031014	US 20040153586	A1	20040805	US 2003684998
Priority Applic: 20030131				US 2003356661
Calculated Expiration: Notes: Subject to any Disclaimer, the term of this patent is extended or adjusted under 35 USC 154(b) by 996 days.				

Document Type:

Inventors:**Gulati Manu...**

...**Moll Laurent R**

Non-exemplary Claims:

...apparatus of claim 6, wherein the data aligner to receive data  
is

based on the **SPI**-4 protocol...

...apparatus of claim 12, wherein the data aligner to receive data is based  
on the **SPI**-4 protocol...

...circuit of claim 17, wherein the data aligner to receive data is based  
on the **SPI**-4 protocol...

...The method of claim 19, wherein the segmenting the data stream segments  
data based on **SPI**-4 protocol...  
...apparatus of claim 6, wherein the data aligner to receive data is based  
on the **SPI**-4 protocol...

...apparatus of claim 12, wherein the data aligner to receive data is based  
on the **SPI**-4 protocol...

...circuit of claim 17, wherein the data aligner to receive data is based  
on the **SPI**-4 protocol...

...The method of claim 19, wherein the segmenting the data stream segments  
data based on **SPI**-4 protocol.

3/3,K/6 (Item 6 from file: 340) [Links](#)

Fulltext available through: [Order File History](#)

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

04722750

E/(A1) TRANSPARENT DATA FORMAT WITHIN HOST DEVICE SUPPORTING  
DIFFERING TRANSACTION TYPES  
(B2) TRANSPARENT DATA FORMAT WITHIN HOST DEVICE SUPPORTING  
DIFFERING  
TRANSACTION TYPES

Inventors:**Gulati Manu** (US); **Moll Laurent R** (US);  
Rowlands Joseph B (US)

Assignee: (A1) Unassigned Or Assigned To Individual  
(B2) Broadcom Corp

Assignee Code: (A1) 68000; (B2) 59773

Probable Assignee (A1): Broadcom Corp

Attorney, Agent or Firm: Garlick Harrison & Markison; Garlick,  
Bruce E.

Publication Date	Application Number	Kind	Date	Number
20031014	US 20040151175	A1	20040805	US 2003684989
20031014	US 7313146	B2	20071225	US 2003684989
Cont.-in-part of: 20030131	Pending			US 2003356661
Prior Publication:	US 20040151175	A1	20040805	
Priority Applic: 20031014				US 2003684989
20030131				US 2003356661
Calculated Expiration:	20230131			
Notes: Subject to any Disclaimer,	the term of this patent is extended or			
	adjusted under 35 USC 154(b) by 996 days.			

Document Type:

Inventors:**Gulati Manu**...

...**Moll Laurent R**

Non-exemplary Claims:

...4. The system of claim 3, wherein: the packet based interface

is a  
    **SPI-4** interface; and the address based interface is one of a  
    HyperTransport interface, a PCI...

...21. The method of claim 20, wherein: the packet-based  
interface is a  
    **SPI-4** interface; and the input/output-based interface is one  
of a  
    HyperTransport interface, a...

...4. The system of claim 3, wherein: the packet based interface  
is a  
    **SPI-4** interface; and the address based interface is one of a  
    HyperTransport interface, a PCI...  
...21. The method of claim 20, wherein: the packet-based  
interface is a  
    **SPI-4** interface; and the input/output-based interface is one  
of a  
    HyperTransport interface, a...

3/3,K/7 (Item 7 from file: 340) [Links](#)

Fulltext available through: [Order File History](#)

CLAIMS(R)/US Patent

(c) 2009 IFI/CLAIMS(R). All rights reserved.

04292563

E/(A1) SYSTEM HAVING INTERFACES AND SWITCH THAT SEPARATES  
COHERENT AND PACKET TRAFFIC  
(B2) SYSTEM HAVING INTERFACES AND SWITCH THAT SEPARATES  
COHERENT AND  
PACKET TRAFFIC

Inventors:**Gulati Manu** (US); Keller James B (US); **Moll**  
**Laurent R** (US); Oner Koray (US); Rowlands Joseph B (US); Sano  
Barton J (US)

Assignee: (A1) Unassigned Or Assigned To Individual

(B2) Broadcom Corp

Assignee Code: (A1) 68000; (B2) 59773

Attorney, Agent or Firm: Garlick Harrison & Markison

Publication Date	Application Number	Kind	Date	Number
-----	-----	-----	-----	-----
20040604	US 20040221072	A1	20041104	US 2004861624
20040604	US 6941406	B2	20050906	US 2004861624
Continuation of: 20021011	US 6748479			US 2002270029
Prior Publication:	US 20040221072	A1	20041104	
Priority Applic: 20040604				US 2004861624
20021011				US 2002270029
Provisional Applic: 20011120				US 60-331789
20011224				US 60-344713
20020114				US 60-348717
20020114				US 60-348777
20020515				US 60-380740
Calculated Expiration: 20221011				
Notes: Subject to any Disclaimer, the term of this patent is extended or adjusted under 35 USC 154(b) by 2 days.. This Patent is subject to a				

Terminal Disclaimer.

Document Type:

Inventors:**Gulati Manu...**

**...Moll Laurent R**

Non-exemplary Claims:

...The apparatus of claim 1 wherein the interface is compatible  
as a  
    system packet interface (**SPI**).  
...

...apparatus of claim 1 wherein the interface is compatible as a  
system  
    packet interface-4 (**SPI-4...**

...HT) interface and at least one interface circuit is compatible  
as a  
    system packet interface (**SPI**).  
...

...HT) interface and at least one interface circuit is compatible  
as a  
    system packet interface (**SPI**).  
...

...HT) interface and at least one interface circuit is compatible  
as a  
    system packet interface (**SPI**).  
...

3/3,K/8 (Item 1 from file: 350) [Links](#)

Fulltext available through: [Order File History](#)

Derwent WPIX

(c) 2009 Thomson Reuters. All rights reserved.

0014363146 *Drawing available*

WPI Acc no: 2004-551820/200453

Related WPI Acc No: 2003-443150; 2003-443151; 2003-459993; 2003-471483; 2003-902176; 2004-070464; 2004-168050; 2004-179407; 2004-179709; 2004-190759; 2004-202696; 2004-225234; 2004-246804; 2004-247141; 2004-340077; 2004-347568; 2004-603213; 2004-614150; 2004-624116; 2004-624314; 2005-010789; 2005-010807; 2005-712402; 2005-785089; 2006-796373; 2007-717114; 2003-459995; 2003-485085; 2003-485086; 2003-485087; 2003-660330; 2003-661006; 2003-846837; 2003-846838; 2003-856022; 2003-880127; 2003-880128; 2003-880129; 2004-033251; 2004-033256; 2007-205863

XRXPX Acc No: N2004-436504

**Hypertransport interface for data communication, has enablement control module that disables and enables deskew blocks and deskew module when they support hyper transport standard and other interface standard, respectively**

Patent Assignee: GULATI M (GULA-I); MOLL L R (MOLL-I); BROADCOM CORP (BROA-N)

Inventor: **GULATI M; MOLL L R**

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040130347	A1	20040708	US 2002380740	P	20020515	200453	B
			US 2002419032	P	20021016		
			US 2003356390	A	20030131		
			US 2003742060	A	20031220		
US 7490187	B2	20090210	US 2002380740	P	20020515	200917	E
			US 2002419032	P	20021016		
			US 2003356390	A	20030131		
			US 2003742060	A	20031220		

Priority Applications (no., kind, date): US 2002380740 P 20020515; US 2002380740 P 20020515; US 2002419032 P 20021016; US 2002419032 P 20021016; US 2003356390 A 20030131; US 2003742060 A 20031220

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20040130347	A1	EN	28	15	Related to Provisional US 2002380740
					Related to Provisional US 2002419032
					C-I-P of application US 2003356390
US 7490187	B2	EN			Related to Provisional US 2002380740
					Related to Provisional US 2002419032
					C-I-P of application US 2003356390

**Original Titles:**Hypertransport/SPI-4 interface supporting configurable deskewing...  
...Hypertransport/SPI-4 interface supporting configurable deskewing Inventor: **GULATI**  
**M...** ...**MOLL L R** Original Publication Data by Authority/ArgentinaPublication No.  
Inventor name & address:**Moll, Laurent R.... ...Gulati, Manu.... ...Gulati, Manu.... ...Moll,**  
**Laurent R**

3/3,K/9 (Item 2 from file: 350) [Links](#)

Fulltext available through: [Order File History](#)

Derwent WPIX

(c) 2009 Thomson Reuters. All rights reserved.

0013987003 *Drawing available*

WPI Acc no: 2004-168050/200416

Related WPI Acc No; 2003-443150; 2003-443151; 2003-459993; 2003-471483; 2003-880128; 2003-902176; 2004-033256; 2004-070464; 2004-179407; 2004-179709; 2004-190759; 2004-202696; 2004-225234; 2004-246804; 2004-247141; 2004-340077; 2004-347568; 2004-551820; 2004-603213; 2004-614150; 2004-624116; 2004-624314; 2004-718057; 2004-736067; 2005-010789; 2005-010807; 2005-712402; 2005-785089; 2006-796373; 2007-717114

XRPX Acc No: N2004-134026

**Virtual channel data transmitting method for data communications, involves packetizing stored data based on transmission protocols when respective protocol is indicated during cycle different from other two cycles**

Patent Assignee: GULATI M (GULA-I); KELLER J (KELL-I); MOLL L (MOLL-I)

Inventor: **GULATI M; KELLER J; MOLL L**

Patent Family (1 patents, 1 countries )

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040017813	A1	20040129	US 2002380740	P	20020515	200416	B
			US 2002419040	P	20021016		
			US 2003356348	A	20030131		

Priority Applications (no., kind, date): US 2002380740 P 20020515; US 2002419040 P 20021016; US 2003356348 A 20030131

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20040017813	A1	EN	20	9	Related to Provisional US 2002380740

Inventor: **GULATI M... ...MOLL L** Original Publication Data by

AuthorityArgentinaPublication No. Inventor name & address:**Gulati, Manu... ...Moll, Laurent ...**Original Abstracts:the stored data in accordance with a 1st or 2nd transmission protocol (e.g., HT, SPI, et cetera) to produce a packetized transmission.

3/3,K/10 (Item 1 from file: 351) [Links](#)

Fulltext available through: [Order File History](#)

Derwent WPI

(c) 2009 Thomson Reuters. All rights reserved.

0014363146 *Drawing available*

WPI Acc no: 2004-551820/200453

Related WPI Acc No: 2003-443150; 2003-443151; 2003-459993; 2003-471483; 2003-902176; 2004-070464; 2004-168050; 2004-179407; 2004-179709; 2004-190759; 2004-202696; 2004-225234; 2004-246804; 2004-247141; 2004-340077; 2004-347568; 2004-603213; 2004-614150; 2004-624116; 2004-624314; 2005-010789; 2005-010807; 2005-712402; 2005-785089; 2006-796373; 2007-717114; 2003-459995; 2003-485085; 2003-485086; 2003-485087; 2003-660330; 2003-661006; 2003-846837; 2003-846838; 2003-856022; 2003-880127; 2003-880128; 2003-880129; 2004-033251; 2004-033256; 2007-205863

XRPX Acc No: N2004-436504

**Hypertransport interface for data communication, has enablement control module that disables and enables deskew blocks and deskew module when they support hyper transport standard and other interface standard, respectively**

Patent Assignee: GULATI M (GULA-I); MOLL L R (MOLL-I); BROADCOM CORP (BROA-N)

Inventor: **GULATI M; MOLL L R**

Patent Family (2 patents, 1 countries )

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040130347	A1	20040708	US 2002380740	P	20020515	200453	B
			US 2002419032	P	20021016		
			US 2003356390	A	20030131		
			US 2003742060	A	20031220		
US 7490187	B2	20090210	US 2002380740	P	20020515	200917	E
			US 2002419032	P	20021016		
			US 2003356390	A	20030131		
			US 2003742060	A	20031220		

Priority Applications (no., kind, date): US 2002380740 P 20020515; US 2002380740 P 20020515; US 2002419032 P 20021016; US 2002419032 P 20021016; US 2003356390 A 20030131; US 2003742060 A 20031220

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20040130347	A1	EN	28	15	Related to Provisional US 2002380740
					Related to Provisional US 2002419032
					C-I-P of application US 2003356390
US 7490187	B2	EN			Related to Provisional US 2002380740
					Related to Provisional US 2002419032
					C-I-P of application US 2003356390

**Original Titles:**Hypertransport/SPI-4 interface supporting configurable deskewing...  
...Hypertransport/SPI-4 interface supporting configurable deskewing Inventor: **GULATI**  
**M...** ...**MOLL L R** Original Publication Data by Authority/ArgentinaPublication No.  
Inventor name & address:**Moll, Laurent R.... ...Gulati, Manu.... ...Gulati, Manu.... ...Moll,**  
**Laurent R**

3/3,K/11 (Item 2 from file: 351) [Links](#)

Fulltext available through: [Order File History](#)

Derwent WPI

(c) 2009 Thomson Reuters. All rights reserved.

0013987003 *Drawing available*

WPI Acc no: 2004-168050/200416

Related WPI Acc No; 2003-443150; 2003-443151; 2003-459993; 2003-471483; 2003-880128; 2003-902176; 2004-033256; 2004-070464; 2004-179407; 2004-179709; 2004-190759; 2004-202696; 2004-225234; 2004-246804; 2004-247141; 2004-340077; 2004-347568; 2004-551820; 2004-603213; 2004-614150; 2004-624116; 2004-624314; 2004-718057; 2004-736067; 2005-010789; 2005-010807; 2005-712402; 2005-785089; 2006-796373; 2007-717114

XRPX Acc No: N2004-134026

**Virtual channel data transmitting method for data communications, involves packetizing stored data based on transmission protocols when respective protocol is indicated during cycle different from other two cycles**

Patent Assignee: GULATI M (GULA-I); KELLER J (KELL-I); MOLL L (MOLL-I)

Inventor: **GULATI M; KELLER J; MOLL L**

Patent Family (1 patents, 1 countries )

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20040017813	A1	20040129	US 2002380740	P	20020515	200416	B
			US 2002419040	P	20021016		
			US 2003356348	A	20030131		

Priority Applications (no., kind, date): US 2002380740 P 20020515; US 2002419040 P 20021016; US 2003356348 A 20030131

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
US 20040017813	A1	EN	20	9	Related to Provisional US 2002380740

Inventor: **GULATI M... ...MOLL L** Original Publication Data by

AuthorityArgentinaPublication No. Inventor name & address:**Gulati, Manu... ...Moll, Laurent ...**Original Abstracts:the stored data in accordance with a 1st or 2nd transmission protocol (e.g., HT, SPI, et cetera) to produce a packetized transmission.

3/3K/12 (Item 1 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

#### EUROPEAN PATENTS

(c) 2009 European Patent Office. All rights reserved.

01581453

#### **System having two or more packet interfaces, a switch, a shared packet DMA (Direct Memory Access) circuit and a L2 (Level 2) cache**

System, welches zwei oder mehr Paketschnittstellen, einen Schalter, einen gemeinsamen Paket-DMA (Direct Memory Access)-Schaltkreis sowie einen L2 (Level 2) Cache aufweist  
Système incluant deux ou plusieurs interfaces de paquets, un commutateur, un circuit DMA (Direct Memory Access) de memoire partagée et une antememoire de second niveau

#### **Patent Assignee:**

- **Broadcom Corporation;** (2064671)  
16215 Alton Parkway; Irvine, California 92618; (US)  
(Proprietor designated states: all)

#### **Inventor:**

- **Sano, Barton J.**  
6156 Northland Trail; Fremont, CA 94555; (US)
- **Moll, Laurent R.**  
18253 Purdue Drive; Saratoga, CA 95070; (US)
- **Oner, Koray**  
1211 Rosseau Drive; Sunnyvale, CA 94087; (US)
- **Gulati, Manu**  
1575 Vista Club Circle, Apartment 302; Santa Clara, CA 95054; (US)
- ...US)  
;;
- **Moll, Laurent R... ...US)**  
;;
- **Gulati, Manu...**  
;;

#### **Legal Representative:**

- **Jehle, Volker Armin (95141)**

Patentanwälte Bosch, Graf von Stosch, Jehle, Fluggenstrasse 13; 80639 München; (DE)

	Country	Number	Kind	Date	
Patent	EP	1313273	A1	20030521	(Basic)
	EP	1313273	B1	20051109	
Application	EP	2002025690		20021120	
Priorities	US	380740	P	20020515	
	US	331789	P	20011120	
	US	344713	P	20011224	

	US	348777	P	20020114	
	US	348717	P	20020114	
	US	269666		20021011	

**Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES;  
FI; FR; GB; GR; IE; IT; LI; LU; MC; NL;  
PT; SE; SK; TR;

**Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7): H04L-012/56 Abstract Word Count: 137**

**NOTE: 1**

**NOTE: Figure number on first page: 1**

Type	Pub. Date	Kind	Text
------	-----------	------	------

Publication: English

Procedural: English

Application: English

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200321	944
SPEC A	(English)	200321	10940
CLAIMS B	(English)	200545	1078
CLAIMS B	(German)	200545	989
CLAIMS B	(French)	200545	1347
SPEC B	(English)	200545	10934
Total Word Count (Document A)	11885		
Total Word Count (Document B)	14348		
Total Word Count (All Documents)	26233		

**Specification:** ...carry packet data. For example, in some embodiments, the interfaces may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI-4** phase 2 interfaces. In other embodiments, the interfaces may be HyperTransport(TM) (HT) interfaces ... ...illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI-4** interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI-4** interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e...defined by the interface from which the Rx circuit receives packet data. For example, the **SPI-4** interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the **SPI-4** interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit... ...embodiment of Fig. 3, the Rx circuit 26A includes a decoder 50 (which includes a **SPI** decoder 52 and an HT decoder 54 including a PoHT BAR1 register 56), the H... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 52) or the HT specification (in the HT decoder 54). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI-4** phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit

may indicate, when set, that a **SPI-4** abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the... ...28C may append the bits to the OVC to generate the VC field in the **SPI-4** packet. The memory buffer address field stores the address of the memory buffer indicated... ...of the system 10. Illustrated in Fig. 12 is exemplary packet data transmitted on a **SPI-4** interface and the packet data stored in a set of input queues of the... ...to the packet DMA circuit 16 for storage in the memory 24. Transmitters on a **SPI-4** interface (e.g. the Tx circuits 28A-28C) are permitted to segment the packets... ...packet fragments of different packets. For example, packets traveling in different virtual channels on the **SPI-4** interface may have fragments interleaved on the **SPI-4** interface. Illustrated on the **SPI-4** interface in Fig. 12 is a first packet (P0) comprising packet fragments P01), P02...

**Specification:** ...carry packet data. For example, in some embodiments, the interfaces may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI-4** phase 2 interfaces. In other embodiments, the interfaces may be HyperTransport(TM) (HT) interfaces ... ...illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI-4** interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI-4** interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ...defined by the interface from which the Rx circuit receives packet data. For example, the **SPI-4** interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the **SPI-4** interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit...embodiment of Fig. 3, the Rx circuit 26A includes a decoder 50 (which includes a **SPI** decoder 52 and an HT decoder 54 including a PoHT BARI register 56), the H... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 52) or the HT specification (in the HT decoder 54). One of the decoders ... ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI-4** phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a **SPI-4** abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the... ...28C may append the bits to the OVC to generate the VC field in the **SPI-4** packet. The memory buffer address field stores the address of the memory buffer indicated... ...of the system 10. Illustrated in Fig. 12 is exemplary packet data transmitted on a **SPI-4** interface and the packet data stored in a set of input queues of the... ...to the packet DMA circuit 16 for storage in the memory 24. Transmitters on a **SPI-4** interface (e.g. the Tx circuits 28A-28C) are permitted to segment the packets... ...packet fragments of different packets. For example, packets traveling in different virtual channels on the **SPI-4** interface may have fragments interleaved on the **SPI-4** interface. Illustrated on the **SPI-4** interface in Fig. 12 is a first packet (P0) comprising packet fragments P01), P02...

**Claims:** ...4, caractérisé en ce que l'une des au moins deux interfaces est une interface **SPI** (<< System Packet Interfaces >>)

7. Le dispositif selon l'une quelconque des revendications 1 à 6...



3/3K/13 (Item 2 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

EUROPEAN PATENTS

(c) 2009 European Patent Office. All rights reserved.

01581452

**Systems including packet interfaces, and packet-DMA (Direct Memory Access) circuits for splitting and merging packet streams**

Systeme, welche Paketschnittstellen und Paket-DMA (Direct Memory Access) Schaltkreise beinhalten, um Paketstroeme zu teilen und zusammenzusetzen

Systèmes incluant des interfaces de paquets et des circuits paquet-DMA (Direct Memory Access) pour separer et fusionner des flux de paquets

**Patent Assignee:**

- **Broadcom Corporation;** (2064671)  
16215 Alton Parkway; Irvine, California 92618; (US)  
(Proprietor designated states: all)

**Inventor:**

- **Sano, Barton**  
6156 Northland Trail; Fremont, CA 94555; (US)
- **Moll, Laurent R.**  
18253 Purdue Drive; Saratoga, CA 95070; (US)
- **Gulati, Manu**  
1575 Vista Club Circle, Apt. 302; Santa Clara, CA 95054; (US)
- ...US)  
;;
- **Moll, Laurent R... ...US)**  
;;
- **Gulati, Manu...**  
;;

**Legal Representative:**

**• Jehle, Volker Armin, Dipl.-Ing. (95141)**

Patentanwalte Bosch, Graf von Stosch, Jehle, Fluggenstrasse 13; 80639 Munchen; (DE)

	Country	Number	Kind	Date	
Patent	EP	1313272	A1	20030521	(Basic)
	EP	1313272	B1	20050323	
Application	EP	2002025688		20021120	
Priorities	US	331789	P	20011120	
	US	344713	P	20011224	
	US	348777	P	20020114	
	US	348717	P	20020114	
	US	380740	P	20020515	

US	270016	20021011	
----	--------	----------	--

**Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES;  
FI; FR; GB; GR; IE; IT; LI; LU; MC; NL;  
PT; SE; SK; TR;

**Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7): H04L-012/56 Abstract Word Count: 90**

**NOTE: 1**

**NOTE: Figure number on first page: 1**

Type	Pub. Date	Kind	Text
------	-----------	------	------

Publication: English

Procedural: English

Application: English

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200321	1562
SPEC A	(English)	200321	10969
CLAIMS B	(English)	200512	1342
CLAIMS B	(German)	200512	1319
CLAIMS B	(French)	200512	1496
SPEC B	(English)	200512	10298
Total Word Count (Document A) 12533			
Total Word Count (Document B) 14455			
Total Word Count (All Documents) 26988			

**Specification:** ...carry packet data. For example, in some embodiments, the interfaces may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI-4** phase 2 interfaces. In other embodiments, the interfaces may be HyperTransport(TM) (HT) interfaces ... ...illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI-4** interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI-4** interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e....defined by the interface from which the Rx circuit receives packet data. For example, the **SPI-4** interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the **SPI-4** interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit...  
...packet destination device (that is, a device that only sinks packets). In embodiments employing the **SPI-4** interface, one **SPI-4** link in the desired direction from an interface circuit 20A-20C may be used... ...circuit 26A may be used to receive packets from the packet source device via the **SPI-4** interface. The Tx circuit 28A may be coupled via the **SPI-4** interface to some other device, or may not be used. Similarly, if a packet... ...circuit 28A may be used to transmit packets to the packet destination device via the **SPI-4** interface. The Rx circuit 26A may be coupled via the **SPI-4** interface to some other device, or may not be used. Furthermore, in some embodiments, a packet source/destination device may be coupled to one **SPI-4** link in one direction to one system 10 (e.g. from the device to the system 10) and

to another **SPI-4** link in the other direction from another system 10 (e.g. from the system...embodiment of Fig. 5, the Rx circuit 26A includes a decoder 50 (which includes a **SPI** decoder 52 and an HT decoder 54 including a PoHT BAR1 register 56), the H... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 52) or the HT specification (in the HT decoder 54). One of the decoders ...

**Specification:** ...carry packet data. For example, in some embodiments, the interfaces may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI-4** phase 2 interfaces. In other embodiments, the interfaces may be HyperTransport(TM) (HT) interfaces ... ...illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI-4** interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI-4** interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e... ...defined by the interface from which the Rx circuit receives packet data. For example, the **SPI-4** interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the **SPI-4** interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit...packet destination device (that is, a device that only sinks packets). In embodiments employing the **SPI-4** interface, one **SPI-4** link in the desired direction from an interface circuit 20A-20C may be used... ...circuit 26A may be used to receive packets from the packet source device via the **SPI-4** interface. The Tx circuit 28A may be coupled via the **SPI-4** interface to some other device, or may not be used. Similarly, if a packet... ...circuit 28A may be used to transmit packets to the packet destination device via the **SPI-4** interface. The Rx circuit 26A may be coupled via the **SPI-4** interface to some other device, or may not be used. Furthermore, in some embodiments, a packet source/destination device may be coupled to one **SPI-4** link in one direction to one system 10 (e.g. from the device to the system 10) and to another **SPI-4** link in the other direction from another system 10 (e.g. from the system... ...embodiment of Fig. 5, the Rx circuit 26A includes a decoder 50 (which includes a **SPI** decoder 52 and an HT decoder 54 including a PoHT BAR1 register 56), the H... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 52) or the HT specification (in the HT decoder 54). One of the decoders

...

3/3K/14 (Item 3 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

EUROPEAN PATENTS

(c) 2009 European Patent Office. All rights reserved.

01581450

**Systems using mix of packet, coherent, and noncoherent traffic to optimize transmission between systems**

Systeme, welche eine Mischung aus paketartigem, koharentem und nicht-koharentem Verkehr verwenden, um die Übertragung zwischen Systemen zu optimieren

Systèmes utilisant un traffic mixte de paquets, traffic cohérent et non-cohérent pour l'optimisation de transmission entre systèmes

**Patent Assignee:**

- **Broadcom Corporation;** (2064671)  
16215 Alton Parkway; Irvine, California 92618; (US)  
(Proprietor designated states: all)

**Inventor:**

- **Sano, Barton, J.**  
6156 Northland Trail; Fremont, CA 94555; (US)
- **Rowlands, Joseph, B.**  
620 Park View Drive #206; Santa Clara, CA 95054; (US)
- **Moll, Laurent, R.**  
18253 Purdue Drive; Saratoga, CA 95070; (US)
- **Gulati, Manu**  
1575 Vista Club Circle Apt. 302; Santa Clara, CA 95054; (US)
- ...US)  
;;
- **Moll, Laurent, R... ...US)**  
;;
- **Gulati, Manu...**  
;;

**Legal Representative:**

- **Jehle, Volker Armin, Dipl.-Ing. (95141)**

Patentanwalte Bosch, Graf von Stosch, Jehle, Fluggenstrasse 13; 80639 München; (DE)

	Country	Number	Kind	Date	
Patent	EP	1313024	A1	20030521	(Basic)
	EP	1313024	B1	20041020	
Application	EP	2002025686		20021120	
Priorities	US	380740	P	20020515	
	US	331789	P	20011120	
	US	344713	P	20011224	

US	348777	P	20020114	
US	348717	P	20020114	
US	269922		20021011	

**Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES;  
FI; FR; GB; GR; IE; IT; LI; LU; MC; NL;  
PT; SE; SK; TR;

**Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7): G06F-013/14 Abstract Word Count: 119**

**NOTE: 1**

**NOTE: Figure number on first page: 1**

Type	Pub. Date	Kind	Text
------	-----------	------	------

Publication: English

Procedural: English

Application: English

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200321	1554
SPEC A	(English)	200321	20371
CLAIMS B	(English)	200443	1819
CLAIMS B	(German)	200443	1743
CLAIMS B	(French)	200443	2068
SPEC B	(English)	200443	20305
Total Word Count (Document A)	21928		
Total Word Count (Document B)	25935		
Total Word Count (All Documents)	47863		

**Specification:** ...interfaces using the PoHT extension. Alternative, such interfaces 30A-30C may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI-4** phase 2 interfaces. In the illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI-4** interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI-4** interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e.g. ...g. transmitting the packet data as a payload of a command, such as PoHT). The **SPI-4** interface may define 16 hardware virtual channels, extendable to 256 virtual channels in software.... ...example, the interface 306 may be a HT interface (using the PoHT extension) or the **SPI-4** interface, as desired. As used herein, a packet circuit includes any circuit which sources... ...example, the packet circuit 302 may be a media access control (MAC) circuit having a **SPI-4** or HT packet interface. The packet circuit 302 may further comprise switches, routers, gateways...on the interface 308. In another embodiment, if desired, the interface 308 may be a **SPI-4** interface if internode coherency is not used in the packet processing system 300.

The.... defined by the interface from which the Rx circuit receives packet data. For example, the **SPI-4** interface and the HT interface may both support 16 virtual channels in hardware

(although more may be used by software in the **SPI-4** interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit... ...embodiment of Fig. 8, the Rx circuit 26A includes a decoder 60 (which includes a **SPI** decoder 62 and an HT decoder 64 including a PoHT BAR1 register 66), a hash... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 62) or the HT specification (in the HT decoder 64). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI-4** phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a **SPI-4** abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the.... 28C may append the bits to the OVC to generate the VC field in the **SPI-4** packet. The memory buffer address field stores the address of the memory buffer indicated...

**Specification:** ...interfaces using the PoHT extension. Alternative, such interfaces 30A-30C may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI-4** phase 2 interfaces. In the illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI-4** interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI-4** interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e.g. ...g. transmitting the packet data as a payload of a command, such as PoHT). The **SPI-4** interface may define 16 hardware virtual channels, extendable to 256 virtual channels in software...example, the interface 306 may be a HT interface (using the PoHT extension) or the **SPI-4** interface, as desired. As used herein, a packet circuit includes any circuit which sources... ...example, the packet circuit 302 may be a media access control (MAC) circuit having a **SPI-4** or HT packet interface. The packet circuit 302 may further comprise switches, routers, gateways... ...on the interface 308. In another embodiment, if desired, the interface 308 may be a **SPI-4** interface if internode coherency is not used in the packet processing system 300.

The...defined by the interface from which the Rx circuit receives packet data. For example, the **SPI-4** interface and the HT interface may both support 16 virtual channels in hardware (although more may be used by software in the **SPI-4** interface, since an 8 bit virtual channel value is supported). Thus, each Rx circuit... ...embodiment of Fig. 8, the Rx circuit 26A includes a decoder 60 (which includes a **SPI** decoder 62 and an HT decoder 64 including a PoHT BAR 1 register 66), a... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 62) or the HT specification (in the HT decoder 64). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI-4** phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a **SPI-4** abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the.... 28C may append the bits to the OVC to generate the VC field in the **SPI-4** packet. The memory buffer address field stores the address of the memory buffer indicated...

3/3K/15 (Item 4 from file: 348) [Links](#)

Fulltext available through: [Order File History](#)

#### EUROPEAN PATENTS

(c) 2009 European Patent Office. All rights reserved.

01581449

#### **System having interfaces and a switch that separates coherent and non-coherent data packet traffic**

System mit Schnittstellen und einem Schalter für die Trennung von kohärentem und nichtkohärentem Datenpaketworkverkehr

Système avec des interfaces et un commutateur pour la séparation de trafic cohérent et non-cohérent de paquets de données

#### Patent Assignee:

- **Broadcom Corporation;** (2064671)  
16215 Alton Parkway; Irvine, California 92618; (US)  
(Proprietor designated states: all)

#### Inventor:

- **Sano, Barton J.**  
6156 Northland Trail; Fremont, California 94555; (US)
- **Rowlands, Joseph B.**  
620 Park View Drive, #206; Santa Clara, California 95054; (US)
- **Keller, James B.**  
210 Iris Way; Palo Alto, California 94303; (US)
- **Moll, Laurent R.**  
18253 Purdue Drive; Saratoga, California 95070; (US)
- **Oner, Koray**  
1211 Rousseau Drive; Sunnyvale, California 94087; (US)
- **Gulati, Manu**  
1575 Vista Club Circle, Apt. 302; Santa Clara, California 95054; (US)
- ...US)  
;;
- **Moll, Laurent R... ...US)**  
;;
- **Gulati, Manu...**  
;;

#### Legal Representative:

- **Jehle, Volker Armin, Dipl.-Ing. (95141)**

Patentanwälte Bosch, Graf von Stosch, Jehle, Fluggenstrasse 13; 80639 München; (DE)

	Country	Number	Kind	Date	
Patent	EP	1313023	A1	20030521	(Basic)
	EP	1313023	B1	20050330	

Application	EP	2002025684		20021120	
Priorities	US	380740	P	20020515	
	US	331789	P	20011120	
	US	344713	P	20011224	
	US	348777	P	20020114	
	US	348717	P	20020114	
	US	270029		20021011	

**Designated States:**

AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES;  
FI; FR; GB; GR; IE; IT; LI; LU; MC; NL;  
PT; SE; SK; TR;

**Extended Designated States:**

AL; LT; LV; MK; RO; SI;

**International Patent Class (V7): G06F-013/14 Abstract Word Count: 148**

**NOTE: 1**

**NOTE: Figure number on first page: 1**

Type	Pub. Date	Kind	Text
------	-----------	------	------

Publication: English

Procedural: English

Application: English

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200321	795
SPEC A	(English)	200321	17923
CLAIMS B	(English)	200513	907
CLAIMS B	(German)	200513	865
CLAIMS B	(French)	200513	994
SPEC B	(English)	200513	17991
Total Word Count (Document A)	18720		
Total Word Count (Document B)	20757		
Total Word Count (All Documents)	39477		

**Specification:** ...interfaces using the PoHT extension. Alternative, such interfaces 30A-30C may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI-4** phase 2 interfaces. In the illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI-4** interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI-4** interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e.g. ...g. transmitting the packet data as a payload of a command, such as PoHT). The **SPI-4** interface may define 16 hardware virtual channels, extendable to 256 virtual channels in software...interfaces (e.g. the HT virtual channels, including the HTcc and PoHT extensions, or the **SPI-4** virtual channels).

Turning now to Fig. 3, an example of traffic received on two... ...the interface 30A may be an HT interface and the interface 30B may be a **SPI** interface. The traffic on the interfaces 30A-30B are illustrated in time order from right... ...switch 18.

The Rx circuit 26B receives only packet traffic in this example (via the **SPI** interface 30B), and thus transmits packets through the switch 18 to the packet DMA circuit 16. If packets are received in different virtual channels on the **SPI** interface 30B, the order of the packets transmitted to the packet DMA circuit 16 may differ from the order on the **SPI** interface 30B (e.g. the packet P3)) is transmitted before the packet P2)) in this... ...embodiment of Fig. 4, the Rx circuit 26A includes a decoder 60 (which includes a **SPI** decoder 62 and an HT decoder 64 including a PoHT BAR1 register 66), a hash... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 62) or the HT specification (in the HT decoder 64). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI**-4 phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a **SPI**-4 abort control word was received in the packet or an error was detected in... ...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the... ...28C may append the bits to the OVC to generate the VC field in the **SPI**-4 packet. The memory buffer address field stores the address of the memory buffer indicated...

**Specification:** ...interfaces using the PoHT extension. Alternative, such interfaces 30A-30C may be system packet interfaces (**SPI**) according to any level of the **SPI** specification set forth by the Optical Internetworking Forum (e.g. level 3, level 4, or level 5). In one particular embodiment, the interfaces may be **SPI**-4 phase 2 interfaces. In the illustrated embodiment, each interface circuit 20A-20C may be configurable to communicate on either the **SPI**-4 interface or the HT interface. Each interface circuit 20A-20C may be individually programmable, permitting various combinations of the HT and **SPI**-4 interfaces as interfaces 30A-30C. The programming may be performed in any fashion (e.g. transmitting the packet data as a payload of a command, such as PoHT). The **SPI**-4 interface may define 16 hardware virtual channels, extendable to 256 virtual channels in software...interfaces (e.g. the HT virtual channels, including the HTcc and PoHT extensions, or the **SPI**-4 virtual channels).

Turning now to Fig. 3, an example of traffic received on two... ...the interface 30A may be an HT interface and the interface 30B may be a **SPI** interface. The traffic on the interfaces 30A-30B are illustrated in time order from right... ...switch 18.

The Rx circuit 26B receives only packet traffic in this example (via the **SPI** interface 30B), and thus transmits packets through the switch 18 to the packet DMA circuit 16. If packets are received in different virtual channels on the **SPI** interface 30B, the order of the packets transmitted to the packet DMA circuit 16 may differ from the order on the **SPI** interface 30B (e.g. the packet P3)) is transmitted before the packet P2)) in this... ...embodiment of Fig. 4, the Rx circuit 26A includes a decoder 60 (which includes a **SPI** decoder 62 and an HT decoder 64 including a PoHT BAR1 register 66), a hash... ...receives the input data from the interface 30A and decodes the data according to the **SPI** specification (in the **SPI** decoder 62) or the HT specification (in the HT decoder 64). One of the decoders ...circuit 26A-26C that received the packet. In particular, if the Rx circuit is receiving **SPI**-4 phase 2 traffic, the LE bit may indicate, when set, that a DIP-4 error occurred. The SE bit may indicate, when set, that a **SPI**-4 abort control word was received in the packet or an error was detected in...

...field stores the IVC for a received packet, if the packet was transmitted on the **SPI** interface. For output queue descriptors, the VC field may store a value for which the... ...28C may append the bits to the OVC to generate the VC field in the **SPI-4** packet. The memory buffer address field stores the address of the memory buffer indicated...

